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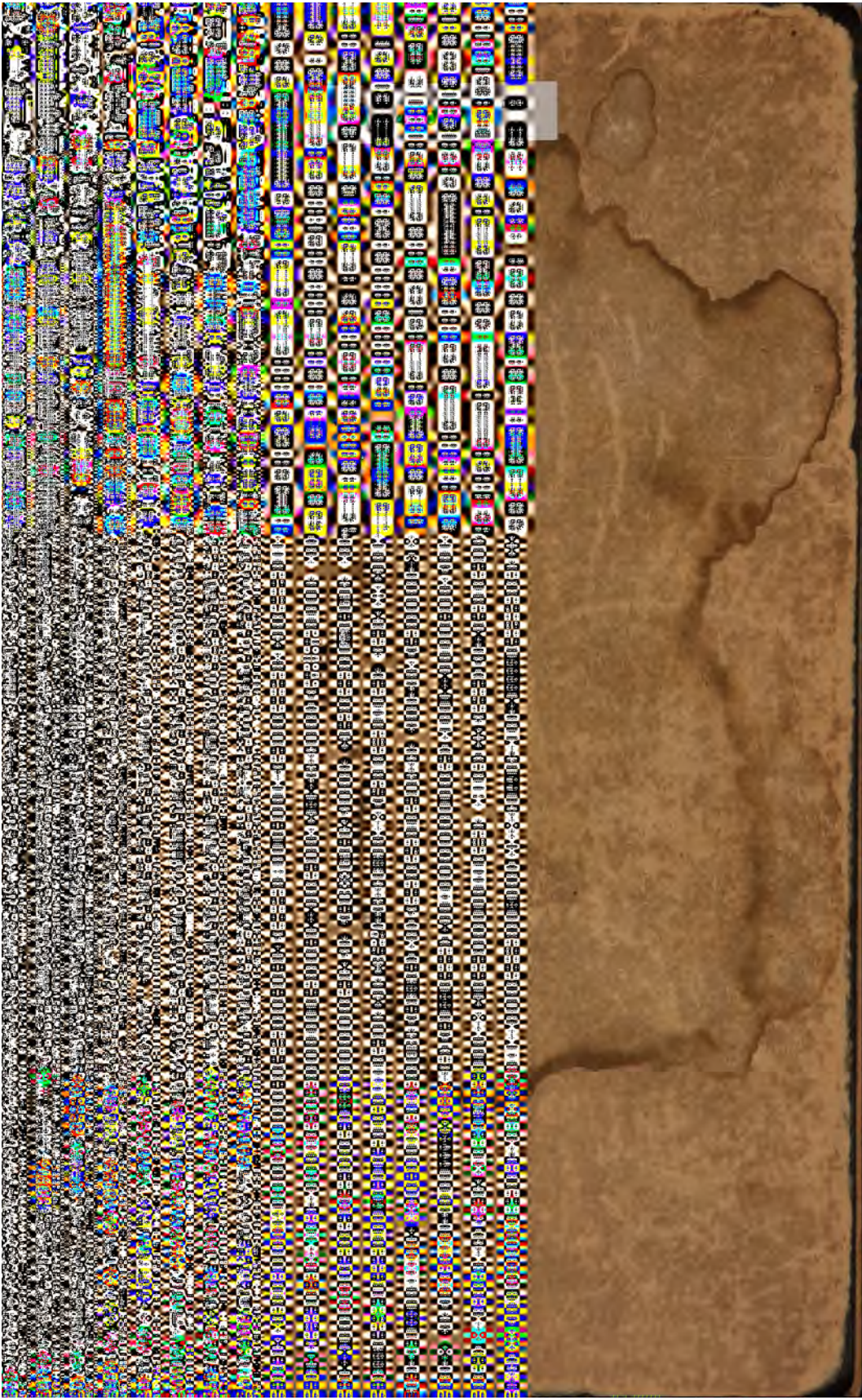
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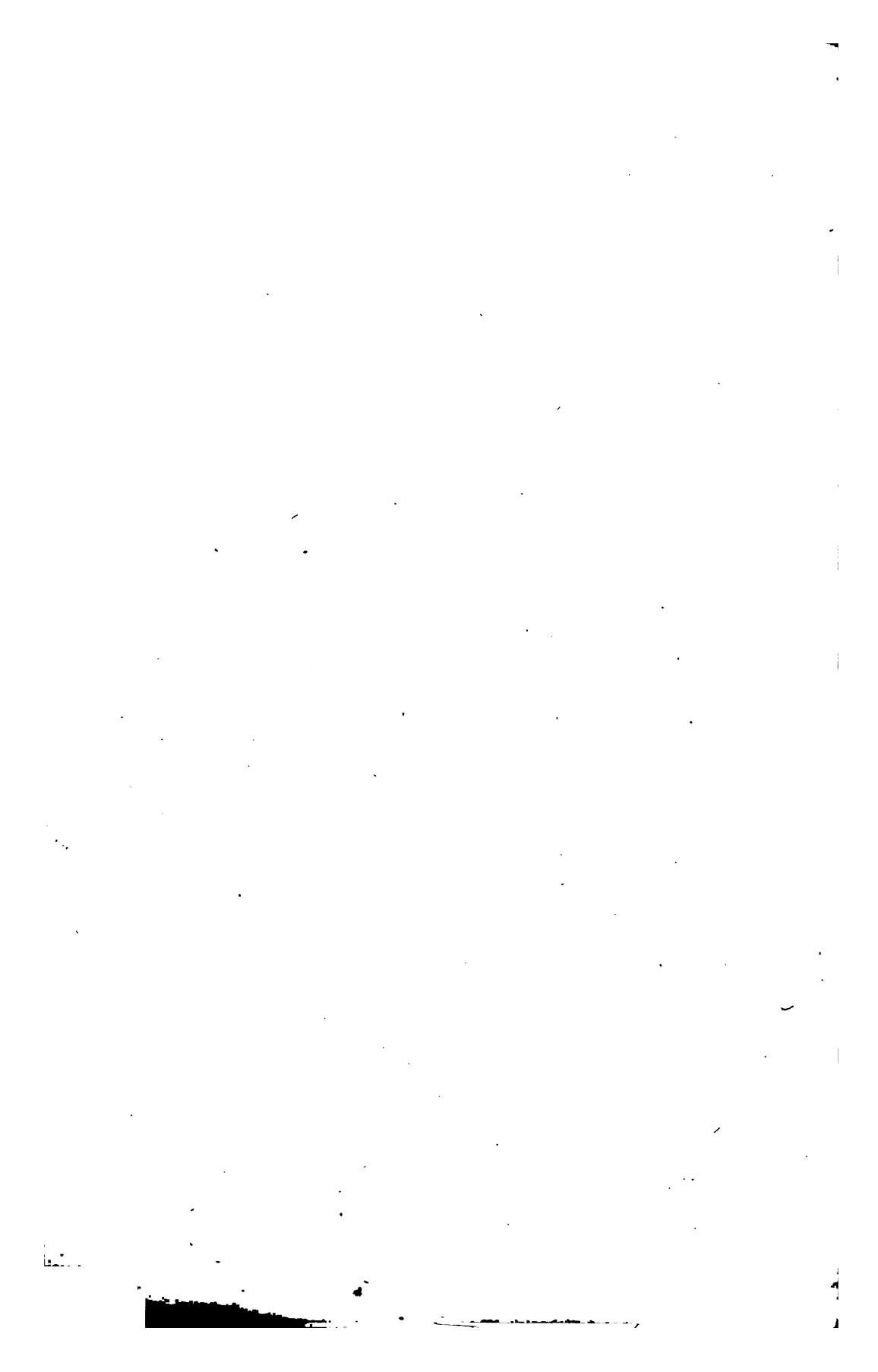
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EFFECTIVE VOTING

AN ARTICLE

ON

PREFERENTIAL VOTING AND
PROPORTIONAL REPRESENTATION

BY

C. G. HOAG

GENERAL SECRETARY OF THE AMERICAN
PROPORTIONAL REPRESENTATION LEAGUE

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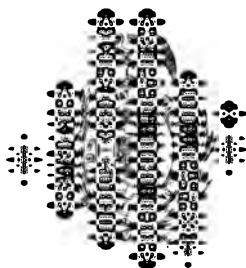
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EFFECTIVE VOTING.

PREFERENTIAL VOTING AND PROPORTIONAL REPRESENTATION.

INTRODUCTION.

Voting is the very basis of our governments, Federal, State, and municipal. If, therefore, the voting systems generally used throughout the country hitherto can be shown to be gravely defective and to be easily replaceable by correct systems, we have at once the explanation of some of the worst political evils from which we suffer and the key to political reform that is truly fundamental.

PRIMARIES, PARTY NAMES, AND THE ADEQUATE BALLOT.

The demand for primary elections is due entirely to two features of our final elections as usually conducted hitherto. The first of these features is allowing party names on the official ballots. The second is restricting the voter to the expression on the ballot of so small a part of his will that a preliminary election is serviceable in cutting out the weaker candidates of any party or group before the final election. If all party names and emblems were kept off the ballot, primaries would not be needed to determine whether, for example, a Taft or a Roosevelt had the better right to use the name Republican on the official ballot; both could be admitted to the ballot, unassociated with any party name, and the struggle between them could be settled on its merits by the voters at the election itself. And if every voter were allowed to express his will on the ballot at the election itself fully instead of limitedly, adequately instead of inadequately, primaries would not be needed to cut down the number of candidates before the final election.

The only adequate ballot, of course, is what is usually called the "preferential" ballot, that is, the ballot that permits the voter to express his will so fully that it can be made effective by the counting officials no matter what circumstances of grouping may be found to have arisen among the voters. If, when you sent a boy to the newsstand for a paper, you were restricted to naming only one, you might have to go without any whenever the boy found, on reaching the stand, that the particular paper named was sold out. If, however, you could name several papers in the order of your preference, you could be almost sure of getting one, and that the one you liked best among those it was possible to get. The boy in this case, of course, takes the place of the chief election officials in the case of an election; and the restriction to the naming of but one paper takes the place of a similar restriction on the inadequate ballot we have been satisfied with hitherto.

Such a ballot is a weak and unstable basis for democracy to rest upon. Consider the last (1913) State election in Massachusetts. Mr. Walsh, who was elected governor—

received ¹ only 183,267 votes, or less than 40 per cent of the total vote; and it may well have been that nearly all of the other 60 per cent preferred any one of the other candidates to Mr. Walsh. In three of the last four Boston city elections the same can be said of the successful candidate for mayor. In the autumn of 1909 a mayor of Salem, Mass., was elected by 24 per cent of the voters, and in the opinion of a prominent Salem lawyer each and every one of the five unsuccessful candidates was, by a strong majority, preferred to the winner. The splitting of the vote which causes this injustice is frequently brought about by design.

Another defect of the inadequate or non-preferential ballot is the discouragement which the prospect of a split vote offers to candidacy. A strong and good man thinks of running. A weaker man who has some following, perhaps very small, enters the lists against another candidate not desired by the supporters of either of the two first mentioned. The strong man refuses to run unless the weaker man mentioned will withdraw. The latter refuses to withdraw, and thus uses the danger of splitting the vote as an effective ladder to self-advancement. This often occurs without reaching public knowledge.

Another defect is the frequent necessity voters are under of voting, not for the candidate they prefer but for the one who, in their judgment, is more available. In the next to last Boston mayoralty election many thousands who really desired to re-elect Mayor Hibbard did not vote for him.

Another defect is the discouragement to voting and registering that is brought about through the citizen's knowledge that the man really desired by him is not a candidate, or his belief that, though a candidate, he cannot be elected. The knowledge or the feeling that something is wrong with the system, combined, perhaps, with the other demands upon his time, keeps him from registering or from voting. In mayoralty elections in large cities the actual vote cast probably does not average more than 70 per cent of the registered voters or 60 per cent of those qualified to register.

It is clear, therefore, that our usual plurality system, first, may not elect the candidate desired by a majority of those who vote; secondly, may discourage desirable candidacy; thirdly, may induce voters to express other than their real opinions; and fourthly, discourages many from registering and voting.

In connection with all our voting, then, the ballots should be adequate or preferential ballots; nominations should be made by petition; party names and emblems should be excluded from the ballot; party conventions, though freely permitted, should not be officially supervised or recognized; and primary elections should be discontinued.

We have now to consider—

THE TWO OBJECTS OF VOTING.

There are two distinct objects to be carried out by voting. Not only has neither of these objects been carried out by the voting systems we have generally used hitherto with even an approximation to correctness, but the distinction itself has not been clearly understood.

One of the objects to be carried out by voting is to *make decisions*, either between policies (measures) or between candidates for administrative positions. To carry out this object what is obviously required by the fundamental principles of democracy is majority voting, that is, a system that will range the majority of the voters concerned against the minority.

The other object to be carried out by voting is to *make up a body fit to make decisions*—subject to the operation of the initiative and the referendum where they are in force—*on behalf of all the voters*, in

¹ The quotations in this paper not otherwise credited are by William Hoag, Esq., of Boston, a former secretary of the American Proportional Representation League.

other words, to make up a deliberative or representative body. Now, though the principles of democracy require that the *decisions made in* such a body should be made by majority voting, they by no means require that the *body itself should be made up* by majority voting. In making up such a body, indeed—as has been recognized universally, though until recently only very confusedly—each member's right to a seat should rest on his being the choice not of a majority of all the voters represented by the body but merely of such part of them as we call a "constituency." In other words, what is wanted, when the object in view is the making up of a representative body, is simply a *condensing* system.

This distinction between the two objects of voting is the prime secret of fundamental electoral reform, transcending in importance even the adoption for all voting of the preferential or adequate ballot. It reveals to us in what cases rational reform means replacing our present plurality system by a majority system without primaries and in what cases it means replacing our present plurality-and-primary system, as applied to the election of representatives by wards or other geographical constituencies, not by a majority-of-a-geographical-constituency system but by a unanimous-constituency, condensing, or "proportional" system.

Plurality-and-primary voting should be replaced by majority preferential voting without primaries wherever, as I have said, a decision is to be made. That means wherever measures are voted on in deliberative bodies, wherever measures are voted on directly at the polls, and wherever administrative officials are selected or removed by deliberative bodies or are elected or recalled at the polls.¹

Wherever, however, the object of an election is to make up a body fit to make decisions and choose administrative officials on behalf of all, our present system should be replaced, as explained in Part II, by a rational unanimous-constituency or condensing system, in which a form of adequate or preferential ballot is used but in which not only primaries and pluralities but even majorities have no place whatever.

PART I.

MAJORITY PREFERENTIAL VOTING (COMMONLY CALLED "PREFERENTIAL VOTING.")

Ballots that allow the voter to express his will adequately with a view to revealing how the majority is ranged against the minority have usually been called simply "preferential ballots," and the systems of applying them simply "preferential voting" systems. Those names, however, must be somewhat restricted if they are not to be ambiguous, for, as has been said above, the adequate or preferential ballot can and should be used not only to reveal the will of a majority, but to carry out the other object of voting, namely to elect a representative body by a process of condensation through the formation of unanimous constituencies. It is best, therefore, when we mean to refer to the adequate ballot as applied only to revealing the will of the majority, to add to the words "preferential ballot"

¹ But see passages in Part II, where it is suggested that such officials should not be elected at the polls at all.

and "preferential voting" the word *majority*, so that the names become *majority preferential ballot* and *majority preferential voting*.

In one form or another majority preferential voting is in use for final elections in Queensland, Western Australia, Grand Junction, Colo., Spokane, Denver, Cleveland, and elsewhere, and for primary elections in Wisconsin, Minnesota, North Dakota, and elsewhere. Unfortunately these systems are applied in the places mentioned not only to the election of administrative officials, where majority¹ voting is desirable, but to the election of representative bodies, where majority voting, as I have said and as I hope to make quite clear in Part II, is utterly out of place.

We may now consider the methods by which majority preferential voting is carried out in these places, and that by which it ought to be carried out.

THE WARE SYSTEM.

Under this system, which was first proposed for actual use by Prof. W. R. Ware, of Harvard University, the voter is allowed to indicate his preferences among the candidates—as many or as few as he pleases—by putting the figure 1 opposite the name of his first choice, the figure 2 opposite the name of his second choice, and so on.

The first count is only of the first-choice votes. If no candidate has a majority, the lowest candidate is excluded and *his votes only* are scrutinized again and added to the votes of the other candidates as the preferences indicate. The candidates are thus successively excluded until only two are left, of whom the higher will have a majority vote [as between the two left], and be elected.

This system, which in Great Britain is called the "alternative vote," is known in Western Australia, where it is used in its complete form, and in Queensland, where it is used in truncated form, as the "preferential vote." That it is preferable to the "second ballot" used in Austria-Hungary, France, Germany, Italy, Norway, and other European countries, is generally conceded by those who compare the two. It does at a single election more than the second ballot system does in two, and does it better. That it is preferable to the primary and plurality system still common in this country, goes without saying. It is not, however, a perfect majority system. For, like the second ballot system, on which it is so obviously an improvement, and like our own double election system, on which it is a still greater improvement, it may drop out at some stage of the whole process of election a candidate who is really preferred by a clear majority to any other candidate in the field taken singly.

The preferential voting system used in the primary elections of Wisconsin and Minnesota is the Ware system modified (1) by the restriction of the voter to the expression of but two preferences for any office, (2) by provision for a first-choice and a second-choice column, instead of the numerals 1 and 2, for the indication of preferences, and (3) by the adaptation of the rules for counting the votes to the provision that a voter may express only two preferences. This

¹ Note that I do not say here majority voting *at the polls*, but simply "majority voting;" the faster we move toward having all the chief administrative officials in populous communities elected, or rather selected, by majority vote of the representative body, instead of at the polls, the sooner we shall have the highest efficiency in the administration of public affairs; but, wherever the election of such officials is carried out, it should be carried out by majority voting.

modified Ware system—the Remsen system; as it should be called—was devised by Daniel S. Remsen, Esq., of New York City, with the twofold intention of making possible the completion of the count without bringing all the ballots or a full transcript record of them together from the voting precincts, as must be done under the complete Ware system, and of simplifying the marking of the ballot by the voter himself. The elimination of the necessity of bringing together either ballots or a full transcript record of the preferences marked on each is a matter of some practical importance at the present time when the voters of this country generally do not realize their need of effective voting keenly enough to be willing to go to much bother or expense to get it. That the Remsen system appreciably simplifies the voting itself, however, I question. Certainly high officials in Tasmania, Western Australia, and elsewhere say flatly that the indication of preferences by the figures 1, 2, 3, etc., is found to be easy by the voters of those countries. For example, Mr. E. J. Stenberg, chief electoral officer of Western Australia, wrote on this point as follows in his official report on the election of 1908, the first one held there under the preferential system:

Speaking generally in regard to the novel method of voting, it would seem that the fears expressed as to the likelihood of a much increased "informal vote list" [i. e., an increased number of invalid ballots] have not been borne out by experience (the percentage being 1.22 only), although the new system appears to have been better understood in some districts than in others.

THE BUCKLIN SYSTEM.

The majority preferential system used in Grand Junction (Colo.), Spokane, Denver, Portland (Oreg.), Cleveland, and North Dakota, was proposed by Condorcet in 1793 as a system which, though incorrect, was the best he could think of in which the counting would be easy. It is said to have been used for a time in Geneva, Switzerland. In recent times, however, it first came into prominence on its adoption in 1909 by Grand Junction, Colo., under the leadership of the Hon. James W. Bucklin of that city.

Aside from certain unessential features of this system as thus far actually applied in America, which are discussed below, it differs from the Ware only in the rules of the count. The Ware rules prescribe—if there is no majority of first choices—the dropping out of the candidate lowest on the poll and the distribution of *his ballots only* according to the second or the next highest available preference marked on them, then the dropping of the next lowest candidate in the same way, and so on until one candidate has a majority of the votes behind him. The Bucklin rules, on the other hand, prescribe—if there is no majority of first choices—the adding together of the first-choice and the second-choice votes for each candidate to see whether any candidate has a majority, counting both; next, if no candidate has such a majority, it prescribes the adding together of the first-choice, second-choice, and third-choice votes for each candidate to see whether any candidate has a majority, counting the three grades of votes together; and so on until some candidate has behind him a majority, counting all the grades of votes thus far taken into account, when that candidate is declared elected.

THE NANSON SYSTEM.

A majority preferential system that differs from the Ware and the Bucklin essentially only in the rules of the count was devised by Prof. E. J. Nanson of the University of Melbourne, Australia, and described by him in a paper read before the Royal Society of Victoria in 1882 and reprinted in the Blue Book of the British Government designated "Miscellaneous No. 3, 1907." Under this system a first choice is given more credit than a second throughout the entire count, a second more than a third, and so forth. Then, in accordance with simple rules formulated by Prof. Nanson on the basis of a complete mathematical solution of the problem, those candidates whose total credits show them to be unquestionably inferior to other candidates in the opinion of the voters as indicated on the ballots are successively dropped out as defeated until the candidate preferred to any other is left and declared elected. Following are complete rules suitable for incorporation in legislation. The notes not printed in italics are not a part of the rules themselves.

NANSON SYSTEM RULES.

1. *At the voting precincts transcribe on coordinate paper (ruled to correspond with the spacing of the names of the candidates on the ballot) the figures marked on the ballots by the voters, using a separate column for each ballot and numbering both ballot and column with a distinctive number in order to be able at any time to compare the original ballot with its record. Send the record to the central electoral board, as ordered by that board.*

2. *On the record, but not on the ballots, let the central electoral board fill in all blank spaces with a figure found by dividing by two the sum of the number of candidates and a number one higher than that indicating the last preference marked on the ballot by the voter. [See p. 14.] [This is merely finishing the voter's work by giving each unmarked candidate the average to which all unmarked candidates are entitled. It insures the counting of the ballot in the subsequent addition to the disadvantage, and to the equal disadvantage, of the unmarked candidates, just as the voter intended. Example: If there were seven candidates, the blank spaces on ballots showing only three preferences would all be filled in with the number $5\frac{1}{2}$; those on ballots showing four preferences, with the number 6; etc.]*

3. *Add the figures of each candidate.*

4. *Exclude as defeated every candidate whose total is equal to or more than the average. [This is reasonable because the voter used larger figures to represent lower preferences.]*

5. *If more than two candidates remain, set down on record sheets figures representing the preferences on all the ballots as among the candidates remaining. Add again, and again eliminate all candidates whose total is equal to or more than the average.*

6. *Proceed again, if necessary, as prescribed in rule 5, until only two candidates remain. When only two remain, examine the record to see which of those two was preferred to the other by the voters, and declare him elected.*

7. *If only one candidate remains after an elimination of candidates, declare him elected.*

NOTE.—The reader who wants to read only the most important parts of this paper will do well to skip everything between this point and the last paragraph of Part I (p. 16), except the section entitled "The Condorcet Test Applied to the Three Systems" (p. 13).

COMPARISON OF THE THREE SYSTEMS OF COUNTING MAJORITY PREFERENTIAL BALLOTS.

Each of the three systems of majority preferential voting just described has its enthusiastic supporters in this country, and I am inclined to think that for a time each of them may have a place in the broad and varied field of our political life; but it is unnecessary that any blind struggle for supremacy should arise among them, for there can be no question in regard to the true nature of each in the mind of anybody who is willing to look at the facts and to give the matter a little thought.

The Ware rules tend, just as does our present system of double elections, to bring the votes of persons belonging to the same party or group together in support of some one candidate of that party or group by the sacrifice of its other candidates. If, therefore, what is wanted is a majority voting system that will encourage group solidarity, this system has much to be said for it. The ultimate criterion of the correctness of a majority system of voting, however, would seem to be that clearly defined by Condorcet in 1785 in a passage translated as follows:

There exists but one rigorous method of ascertaining the wish of a majority in an election. It consists in taking a vote on the respective merits of all the candidates compared two by two. This can be deduced from the lists upon which each elector has written their names in *order of merit*. * * * But this method is very long.¹

Judged by this test, the Ware method (as also the Bucklin) is defective, for it may drop out a candidate preferred by a majority of the voters to any other one of the candidates taken singly. The truth of this is proved below (p. 14) in connection with 15 actual ballots. It can also be seen from a still simpler example. Suppose that in an election to elect one person from three candidates, Smith, Brown, and Jones, 5,000 of the voters record first choices for Smith, 4,000 first choices for Brown, and 3,000 first choices for Jones. Then, according to the Ware rules, Jones is declared out of the running, and his ballots distributed according to second choices. Let us suppose that, as set forth in the result table below, 400 of the distributed votes go to Smith and 2,600 of them to Brown, and that Brown is therefore declared elected with 6,600 votes (his original 4,000 plus the 2,600 received on the distribution of Jones's ballots). In that case the result is wrong if, as we may suppose for the sake of revealing the fallibility of the system, Jones is preferred to Brown by a sufficient number, say 4,000, of those whose first choice was Smith. For in that case no less than 7,000 of the voters (the 3,000 who gave first choice to Jones plus the 4,000 who gave first to Smith and second to Jones) have clearly expressed on the ballots their preference of Jones,

¹ Oeuvres de Condorcet, vol. XV, pp. 28, 29, edition of 1804.—It is precisely the comparison "two by two," said by Condorcet to be the ultimate test, though "very long," that the ingenious Nanson rules accomplish quickly.

the candidate dropped out by the Ware rules, to Brown. The 6,600 votes by which in this case Brown was declared to be elected, though a majority, were made up, it is to be borne in mind, of 4,000 voters who indicated on their ballots that they preferred Brown to either of the other candidates and of 2,600 voters who indicated not that they preferred Brown to Jones, but only that they preferred Brown to Smith. It is doubtless true that the probabilities are against the elimination thus under the Ware rules of the candidate who, according to the record on the ballots, could command a clear majority of the votes against any other candidate taken singly; and the system is by no means to be condemned for political uses where a perfect majority preferential system cannot yet be adopted; but that it is not infallible in giving the result demanded by the criterion of Condorcet must be admitted.

	First choice.	Second choice.
Smith.....	5,000	500 on ballots marked for Brown as first choice. 400 on ballots marked for Jones as first choice.
Brown.....	4,000	1,000 on ballots marked for Smith as first choice. 2,600 on ballots marked for Jones as first choice.
Jones.....	3,000	4,000 on ballots marked for Smith as first choice. 3,600 on ballots marked for Brown as first choice.

The essential principle of the Bucklin system can be understood from a brief analysis of the counting under this system of the same 12,000 ballots we have just considered in connection with the Ware rules. Those ballots would be tabulated for the Bucklin count as follows:

	First choices.	Second choices.
Smith.....	5,000	900
Brown.....	4,000	3,600
Jones.....	3,000	7,500

With the votes cast thus an election board canvassing the returns under the Bucklin rules would proceed, on finding that no candidate had a majority of first choices, to add firsts and seconds together. And on finding that both Brown and Jones had behind them a majority, counting the votes of these two grades, the board would declare elected that one of them who had most, namely Jones.

Now, what is the principle on which Jones is thus declared elected under the Bucklin rules? In other words, what is the nature of that majority which the Bucklin count gets together behind the candidate whom it elects?

To answer the question in connection with our example, the majority of 10,500 votes that elects Jones under the Bucklin rules is undoubtedly composed of 10,500 different persons, the system clearly

preventing the counting into such a total of two choices voted by any one voter; but it is composed of voters of three groups, (1) those who gave their first choice to Jones, (2) those who gave their first to Smith and their second to Jones, and (3) those who gave their first to Brown and their second to Jones; and these groups are united only in this one respect, that they consider Jones to be *one of the two best candidates* for the office to be filled. The principle of the Bucklin system, then, is that if no candidate is considered by a majority better than the field, the election goes to that candidate, if any, who is considered by a majority—or by the larger majority, in case there is more than one—to be *one of the two best in the field*; that if no candidate is considered by a majority one of the two best, the election goes to that candidate, if any, who is considered by a majority—or by the largest majority if there is more than one—*one of the three best in the field*; etc.

This principle that underlies the Bucklin rules is not an altogether unreasonable one; but it is certainly not the correct one, for it frequently elects a candidate other than the one who should be elected according to the sound criterion of Condorcet. Suppose the 3,500 voters who gave Brown their first choice and Jones their second, though they all greatly preferred Jones to Smith, had not recorded any second choice. Then the result of the second count would have been, Smith 5,900, Brown 7,600, Jones 7,000; and in that case Brown instead of Jones would have been declared elected, under the Bucklin rules, in spite of the fact that, according to the record on the ballots, 7,000 of the voters (namely, the 3,000 who gave their first choice to Jones and the 4,000 of Smith's supporters who gave their second choice to Jones) clearly preferred Jones to Brown.

It may be argued that the failure of the Bucklin rules in this case is due to the fact that Brown's supporters did not record on the ballots their real will. The reply to that is twofold. In the first place, the Bucklin rules do not in this case elect the candidate clearly preferred by a majority of voters, to any other in the field taken singly, *according to the ballots as cast*; and perfect rules of counting would do just that every time. In the second place it was nothing but the rules of the count that led Brown's supporters not to record their real will fully on the ballot; and the fact that the rules would be *likely* to have such an effect on the voters suggests a defect in them. This point, however, the effect of the rules of counting on the voters, should be considered not only in relation to the Bucklin system but also in relation to the other two systems we are analyzing.

EFFECT OF THE DIFFERENT SYSTEMS ON THE VOTER.

Under the Ware rules the voter knows that his second or any lower choice that he may mark on the ballot cannot under any circumstances lessen the chances of election of a candidate whom he marks as higher in his scale of preferences. This is justly regarded by supporters of the Ware system as a strong argument in its favor. But such persons ought not to forget, as they frequently do, that although under the Ware rules it can never lessen the chances of the candidate you actually mark as first choice to mark another candidate as second, yet, if you can foresee that your first choice cannot win and

that your second is in danger of being dropped out after the first count, it may seem best to you, under the Ware rules, to mark your first choice for the candidate who is really your second in order to help elect him against one or more others who will be strong rivals and whom you like still less. This can readily be seen in the case of the supposed election used above in illustrating the fallibility of the Ware count. If it were understood that the Ware rules were to be used in the count, many of the 4,000 voters who gave their first choice to Smith and their second to Jones, if they could foresee that Smith would be beaten by either Brown or Jones, would find it advantageous to mark Jones instead of Smith as first choice, despite their real preference of Smith to Jones, in order that Jones, not being dropped out after the count of first choices, should be elected instead of Brown. And, of course, if the chances of Smith's own election had been considerably less than they were in the case supposed, it might have seemed so probable that the election must lie between Jones and Brown that to voters of the group mentioned the inducements to mark Jones as first choice, though in fact he was not, might have been very strong.

The possibility, under the Bucklin rules, of injuring the chances of your first choice by marking a second has been mentioned above. It is equally true that, under the Bucklin rules, there is the possibility of injuring the chances of either your first choice or your second by marking a third. And so forth. We have now to ask *why* this is so. It is so because on the second count, which will be taken if no candidate has a majority on the first count (of first choices), a voter's second choice will count *equally* with his first, so that in case a second count has to be taken, *the effect of a voter's marking a second choice is completely to neutralize his first choice so far as those two candidates are concerned.* Likewise, of course, the effect under the Bucklin rules of a voter's marking a third choice, in case a third count has to be taken, is completely to neutralize his first choice and his second so far as those three candidates are concerned. Whether, therefore, in an election to be carried out under the Bucklin rules, it is wise for a voter to abstain from marking a second choice depends simply on whether it seems to him more important, all things considered, to help his second choice along with his first against all the rest or to help his first choice against his second. This question, in turn, will depend (1) on where the big gap in the gradation of his preferences comes and (2) on which candidates he thinks the election probably lies between. And whether or not, if it seems to him best to mark a second choice, it will seem best to mark a third also, and so forth, depends on precisely similar considerations.

Under the Nanson rules no candidate is dropped out until it is mathematically certain that he is not the strongest according to Condorcet's test; and *a lower choice is not reckoned as equal to a higher choice in any contingency; from first to last the gradations of each voter's preferences are preserved and given effect in the count.* From these facts it might be inferred that under these rules it would be impossible for a voter to help a candidate whom he wanted to elect in any other way than by indicating his real preferences on the ballot as fully as possible. Yet that is not the case; though these rules, unlike the Ware and the Bucklin rules, are *infallible in their interpretation of the ballots as actually marked*, they cannot prevent a voter

who is able to predict which candidate will be his favorite's strongest rival from helping his favorite against that rival by marking the latter as his last choice even though he may regard him as really his second. This possibility is the only point I have ever seen advanced as a supposed weakness of the Nanson rules. But is it really a weakness? I think not. It amounts simply to this, that a voter who feels sure that he can predict which candidate will prove to be his favorite's strongest rival has the privilege of taking the risk of injuring the chances of that supposed rival, against others still less desirable, in order to avoid helping that rival's chances against the candidate of the voter's first choice to the extent that he would by marking the rival as second choice under rules providing that under no circumstances can a second choice count *equally* with a first. And I see no grave objection to a voter's having this privilege. With the number of candidates and the spontaneity of grouping that may be expected after the preferential ballot is adopted for majority voting, voters will probably seldom be able to predict the situation accurately enough to care to take the risk mentioned; and the possibility that occasionally some voters may take it does not seem likely to have any harmful political effects.

Nothing short of experience can prove to just what extent each of the three sorts of rules for majority preferential voting will lead voters to mark their ballots otherwise than according to their real will or to abstain from expressing their will fully. And nothing short of experience can prove just what harm, if any, will result from any such effect that may be produced from any one of the sets of rules. I venture, however, to express the opinion that in their effect on the marking of their ballots by the voters the Nanson rules will work out best, the Ware rules next best, and the Bucklin rules third best. In this ranking list our present system—the non-preferential ballot, etc.—would be, of course, in respect to the points considered in this paragraph, a very bad fourth.

THE CONDORCET TEST APPLIED TO THE THREE SYSTEMS.

Suppose A, B, C, D, and E are candidates for a single office that is to be filled by majority vote, and suppose the ballots cast in the election, 15 in number, are marked as indicated below, where each line of figures running up and down the page represents the preferences of one of the 15 voters as expressed on his ballot:

A	2	3	2	2		2	2	1	2	2
B	3		1	1	3	4	3	3	2	1
C		4		4	1	2	1	3	4	4
D	1	2	4	3	4	3	4	2	1	3
E		1	3		2	1	1	4		1

An examination of these ballots will show the reader that if counted according to the non-preferential plurality system still prevalent in this country, C or E would be regarded as the choice of the voters (though a new election would be necessary), the vote standing:

A 1, B 3, C 4, D 3, E 4.

If the ballots were counted according to the Ware rules, candidates A, D, and E would be dropped one after another in that order, and C would win over B and be declared elected.

If the ballots were counted according to the Bucklin rules, A would be declared elected; for as no candidate has a majority of first choices, firsts and seconds would be added together, and A would win on the two together thus:

A 9, B 4, C 5, D 7, E 5.

The election of either C, E, or A, however, would be defeating the real will of the voters, the ballots showing clearly that 10 of the 15 voters preferred D to C, that 8 of them preferred D to E, and that 9 of them preferred D to A.

Following is the record of the ballots according to the Nanson system, showing how the true will of the voters, the election of D, is ascertained by that system:

Record or transcript of the 15 ballots shown above.

[The figures in italics are those supplied to the record, in accordance with No. 2 of the Nanson rules printed on a preceding page to make the record of each ballot arithmetically complete.]

A	2	3	2	2	5	2	5	4	2	2	1	4	2	2	4=42
B	3	5	1	1	3	4	3	4	5	3	2	1	5	3	4=47
C	4½	4	5	4	1	5	2	1	3	4	4	4	1	1	1=47½
D	1	2	4	3	4	3	4	2	1	1	3	2	3	5	2=40
E	4½	1	3	5	2	1	1	4	4	5	5	4	1	4	4=48½

Divide total by number of candidates, 5)225

Average is 45

B, C, and E, being above the average, are eliminated, according to No. 4 of the Nanson rules (p. 8).

On examining, in accordance with No. 6 of the Nanson rules, the record of all the votes to ascertain the preference of the voters between A and D, it appears that six prefer A to D and nine prefer D to A. D is therefore declared elected.

To test the accuracy of the Nanson method in this election, apply Condorcet's rule of a two-by-two comparison. On comparing D thus with each of the others singly, it is seen that he defeated—

A	9 to 6,
B	8 to 7,
C	10 to 5,
and E	8 to 7.

D is, therefore, clearly entitled to win.

Fortunately the Nanson count can give nothing but such a correct result in any case, for it is simply a convenient formulation of a mathematical principle that covers all cases. Virtually, indeed, it makes the comparison of each candidate with every other one separately, thus rendering its verdict according to the "rigorous method" (see quotation from Condorcet on p. 9) which everybody must admit to be correct. It is, therefore, the ultimate system to which other systems must eventually yield, for deducing from preferential ballots the will of the majority.

RELATIVE DIFFICULTY OF THE THREE COUNTS.

The work of the election officials, all told, is undoubtedly greater under the Ware system or the Nanson than under the Bucklin. Under either of the former systems, however, the only work at the voting precincts in addition to that required under the non-preferential system is the numbering of each ballot and the column of the return sheet on which its preferences are to be entered and the copying of those preference numbers in the column. As the record sheets would be ruled to correspond with the spacing of the names on the ballot, so that the copying of the preference numbers in the right squares could be done quickly and correctly by men of average ability,

this extra work at the precincts is not a serious obstacle to the adoption of either the Ware or the Nanson system. It should be noticed that the reading off of the figures called for by No. 5 of the Nanson rules can be done very rapidly if a line is drawn on the record sheets through the figures credited to each of the candidates being excluded.

THE BEST FORM OF BALLOT.

The form of ballot customary under the Ware and the Nanson system is this:

A.....	3
B.....	2
C.....	
D.....	1
E.....	
F.....	
G.....	4

Of course, rotation of the names (see sec. 2 of the Hare rules in Part II), or any other method of arranging the names on the ballot fairly, may be substituted for the alphabetical order indicated on the form above. The use of numerals to indicate preferences—first for D, for example, second for B, etc., as on the form above—reduces the chances of error in marking the ballot and makes it possible for the voter to indicate as many preferences as he pleases in a single column which can conveniently be held close to the column on the record sheet on which the preference numbers are to be transcribed.

The form of ballot customary under the Bucklin system is this:

	First choice.	Second choice.	Other choices.
A.....			X
B.....		X	
C.....			
D.....	X		
E.....			
F.....			
G.....			X

The reasons for the adoption of this form of ballot were, I think, two: first, it made possible the designation of preferences by means of the X, to which our voters are accustomed; secondly, it was thought to be easier for the election officials to call off the different orders of preferences from the three separate columns than to call them off from different numerals in a single column. These reasons have some weight; but they are greatly outweighed, in my opinion,

by the advantages of using in connection with the Bucklin system, where that system can not be supplanted by the Nanson system immediately, the ballot customary under the Ware and the Nanson system.

In the first place, the column for "other choices" indiscriminated from each other leads to an error in the count that is altogether unnecessary and not easily defensible. For inevitably, if the preferences lower than the second are not distinguished from each other, the counting rules must provide, as in fact they do in most places where the Bucklin system is in use, that if no candidate has a majority of first choices or a majority counting firsts and seconds together, all the "other choices" to the credit of each candidate shall be added to his firsts and his seconds, and that the candidate who then has most votes of all grades together shall be declared elected. But it is certainly an error to add in fourth, fifth, and lower choices until it has been ascertained that no candidate has a majority of the voters behind him when only firsts, seconds, and thirds are taken into account. In other words the system is gravely inconsistent if it does not provide for a separate reckoning of the total for each candidate after the admission to the count of each lower order of preferences.

In the second place, the ballot of the single column, for the indication of preferences by numerals, gives the voter the opportunity of indicating as many preferences as he pleases without covering a wide sheet of paper with columns for crosses. And as we certainly ought to permit the voter, as soon as it is feasible to provide for it, to express his will on the ballot not only as exactly but as fully as he wants to, this is an important point.

Finally, the ballot of the single column is the ballot we shall unquestionably want for our voting to make up representative bodies (see Part II of this paper), and it is unfortunate to have two forms of ballot in use when one will do. It is true that under two of the systems of voting for representatives explained in Part II crosses are used instead of figures; but that is only because under those systems one mark suffices. Under the Hare system, which is thought by the leading authorities to insure the truest results of all, the use of numerals for the indication of preferences is universal.

So much for systems of voting designed to range the majority of the voters against the minority, as when a decision is to be made in respect to measures or in respect to officials, such as the chief administrators, who should be satisfactory to the majority. When, however, the object of voting is not to make a decision at all, but to make up a body fit to make them on behalf of all the voters—in other words, a representative or deliberative body—then majority voting, even by an infallible system, is only one degree less absurd and less disastrous to democracy than plurality voting itself. *Indeed, the advantage of using the best preferential majority system instead of the old system (of the unchangeable vote, the two elections, and the plurality rule) where a majority vote is called for, is trifling in comparison with the disadvantage of using such a majority system when the object of the voting is the election of a representative body.* For when that is the object, the principles of democracy are grossly violated if the system of voting does not insure that no candidate can be elected to the

body unless he is supported not merely by a majority but by approximately the whole of a constituency, so that the process of electing the body as a whole shall be simply a *condensation* of all the voters into their true leaders.

PART II.

UNANIMOUS-CONSTITUENCY VOTING.

("PROPORTIONAL," OR TRUE, REPRESENTATION.)

The misrepresentation of the people in their "representative" bodies is unnecessary. It is due to the blunder, which will seem ridiculous to our children, of defining the constituency of each member by an arbitrary geographical line and then allowing a plurality—or a majority—of the voters within the designated area to elect the "representative." Such a method virtually disfranchises not only all who vote against the candidate elected, who frequently comprise from 40 to 60 per cent of the whole electorate, but also—to a less degree—those who voted for that candidate in the final election not because they preferred him to all others but only because they disliked him less than any of the others who had come through the primaries as officially recognized candidates. Thus our present system makes it certain that most of the ballots will be thrown away if marked for the voter's first choice, thereby discouraging the expression of his real will on the ballot, and makes it probable that a large percentage of the ballots will be utterly ineffective *even as marked*.

How this crude single-member district or ward system works out in the make-up, for example, of a city council, may be tested by the returns of any city election. I will illustrate with the figures of the election of 16 councilmen by wards in Columbus, Ohio, on November 2, 1913. I take the figures of that city for no other reason than that I happened to be there the day after the election. In the election of the 16 ward councilmen the Democrats cast about 43 per cent of the votes, the Republicans about 40 per cent, the Socialists about 13 per cent, and others about 3 per cent. Now, it is easy to see that if the adherents of all these parties had happened to be distributed quite evenly throughout the 16 wards, the Democrats would have elected their man in every one. If, on the other hand, the distribution had been less favorable to the Democrats, they would have won fewer seats. If, for example, the Democrats had happened to be packed solidly into as few wards as possible, they would have filled less than half of them and could not have elected more than 8 of the ward councilmen. Finally, if the distribution of the voters had been as unfavorable as possible to the Democrats, the latter might not have elected a single one of the 16 councilmen. This is easily seen: if the Democrats had been distributed evenly throughout the 16 wards, and their opponents had not, they might have been defeated in 12 of the wards, for example, by the Republicans and in 4 of them by the Socialists. *Whether, therefore, the Democratic ballots actually cast were to elect 16 ward councilmen, or 15, or 14, or 13, or 12, or 11, or 10, or 9, or 8, or 7, or 6, or 5, or 4, or 3, or 2, or 1, or none depended—and the same thing would have been true even if a perfect system of majority preferential voting had been in use—on nobody's opinion or will or vote, but only on blind chance—how the Democratic*

votes happened to be distributed geographically throughout the city—unless it depended on something still worse, the deliberate injustice known as gerrymandering.

To get rid of this defect it is necessary only to substitute for the arbitrary geographical constituency of the ward system a constituency defined as *enough voters anywhere in the city, unanimous in the support of a candidate, to deserve to send him in.* In other words it is necessary only to define the constituency in terms of *unanimity of will* instead of in those of *proximity of home.*

The result of making this simple but extremely important change is commonly called "proportional representation." A name from some points of view better would be unanimous-constituency, or true, representation.

It is easy to see that if each of the constituencies is unanimous in the desire to elect the candidate it does elect, and if the constituencies are approximately equal in size, the general result of the election must approximate the ideal of an election to make up a body that is to be entrusted with the power of making decisions on behalf of all. For that ideal, as I have already suggested, is simply the *condensation*, so to speak, of the many voters into the few leaders fit to represent them.

Here is an example of such condensation, the election of members of the Parliament of Tasmania, where the Hare system of proportional representation explained below is in use:

ELECTION OF 1912.

	Votes.	Seats actually obtained.	Seats in proportion to votes.
Labor.....	33,634	14	13.66
Non-labor	40,252	16	16.24

ELECTION OF 1913.

	Votes.	Seats actually obtained.	Seats in proportion to votes.
Labor.....	30,896	14	14.14
Non-labor	34,676	16	15.86

With such results compare those under our present crude system. The number of Socialist votes for Congressman in 1908, relatively to the number cast for Congressmen by other parties, entitled the party to several Members, but they gave it only one. *In 1912 the party, though it doubled its vote, did not elect a single Congressman.* In the momentous general elections of January, 1910, in Great Britain and Ireland, where the same single-member geographical constituency is in use—

there were 144 constituencies in which the successful member was returned by a majority of less than 500. Of these constituencies 69 seats were held by the Ministerialists [the Liberals, Irish Nationalists, and Labor Party men] and 75 by the Unionists [Conservatives]. The majorities were in some cases as low as 8, 10, and 14. The aggregate of the majorities in the Ministerialist constituencies amounted to 16,931, and had some 8,500 Liberals in these constituencies changed sides the Min-

ist majority of 124 might have been annihilated. On the other hand, the Unionists held 75 seats by an aggregate majority of 17,389, and had fortune favored the Ministerialists in these constituencies their majority would have been no less than 274. Such is the stability of the foundation on which the House of Commons rests, such the method to which we trust when it is necessary to consult the nation on grave national issues.¹

Many well-meaning citizens, realizing that there is something—they have no clear idea what—wrong with the single-member district system of representation, have proposed to elect all the members of a city's council or "commission" at large together, and to allow each voter to vote for them *all*. Such a proposal, of course, means jumping from the frying pan into the fire. It means abandoning the only obviously good feature of the single-member district or ward system—the constituency.

The simplest unanimous-constituency or proportional system for electing a representative body—say a city council of nine, or the nine Members of Congress elected from a district comprising a quarter of the population of Pennsylvania—is arrived at by providing merely that the Members shall be elected at large, that no voter shall vote for more than one, and that the nine candidates who receive most votes shall be elected. This is the system actually used for the election of the Japanese House of Representatives, Japan having endured only from 1889, the year of her constitution, until 1900 the district system that still hinders political and social progress in the United States.

Though the constituencies that elect Members under this system are all unanimous, they may be very unequal in size; the candidate who receives most votes may receive two or three times as many as the weakest one of the nine elected. This possibility naturally leads the parties to estimate carefully how many candidates they can elect by dividing their strength, as nearly equally as possible, among several; and to carry out such a program as this successfully it becomes necessary for the ordinary voter to cast his vote for one or another of his party's candidates according to advice from the party's headquarters. In spite of these obvious drawbacks this Japanese system is far better than the single-member district system and should be supported for the election of representative bodies in cases where the obstacles in the way of the adoption of the still better systems now to be described are really insuperable.

What is it that the Japanese system lacks? Simply the adequate or preferential ballot that is found so useful in majority voting, the ballot that permits the voter to express his will as fully as he wants to, so that it can be carried out in the count under almost any circumstances that may be found to have arisen.

One of the simplest systems of unanimous-constituency representation in which a sort of preferential ballot is used is that covered by the list-system provisions below. Its main features are these. Candidates are nominated—by petition, preferably—in lists. The several lists of candidates thus nominated are printed on the ballot under the headings, "List 1," "List 2," etc., no party names or emblems being necessary or desirable. You vote such a ballot by marking a cross against one name on one list. Such a cross means that your vote is to count one toward determining how many representatives the supporters of that list are to elect and that it is also to help up toward

¹ J. H. Humphreys: *Proportional Representation*, Methuen & Co., London, 1911, p. 27

ked. So if list 1, for
te cast for represent-
icular candidates to
who got most votes
tial ballot, you see,
ugh the voter marks
he desire to give his
such other candidate

RESENTATION.

Congress from each district
or petition to nominate any
of¹ The petitions
uch petition may nominate
e are seats to be filled from
oners wish. Each petition
law, shall contain the signed
authorities at least twenty

whether one or more, nomi-
shall appear on the ballots,
by the election authorities.
list shall be printed on the
own below.

ESS.

om you want to vote. (If the
is found to have too few votes
ate on the same list.)
ross once, return it to the elec-

List 3.

	[Domicile address]	
D.....		
	"	"
L.....		
	"	"
M.....		
	"	"
N.....		
	"	"
Q.....		
	"	"
U.....		

course, in States in which custom
he Hare system of proportional
he list system, though, of course,
numum for a list instead of a mini-
ould be about a third of the number

Sec. 4. The total number of valid ballots for Representative in Congress cast in the district shall be divided by the number of Representatives to be elected from the district, and the quotient shall be the "quota."

Sec. 5. The total number of full quotas contained in the total number of valid ballots cast in the district for the candidates of a list shall be the number of candidates on said list to be declared elected on the first assignment of seats.

Sec. 6. After this first assignment of seats, the remaining seats, if any, shall be assigned as follows: The number of valid ballots for the candidates of each list shall be divided by the number of seats, plus one, already assigned to such list, and to the list showing the largest quotient shall be assigned one additional seat. This procedure shall be repeated until the number of seats assigned shall be that to which the district is entitled.¹

Sec. 7. The candidates to be declared elected from any list shall be those individually receiving the largest number of votes.

Sec. 8. A ballot marked for names on more than one list shall be set aside as invalid. A ballot marked for more than one name on one list, but not for names on more than one list, shall be counted as a vote for the list but shall not be counted in determining the standing on that list of particular candidates.

Sec. 9. To any vacancy that shall occur, otherwise than by the operation of the recall, in the delegation of Representatives in Congress from a district, the [here name the proper election authorities] shall appoint, to fill out the unexpired term, that candidate from the list on which the vacating Representative was nominated who, of all the unelected candidates on that list, received most votes. [Here add provisions for filling the vacancy in case the provision in this section fails.]

Three modification of these provisions should be mentioned.

The first is adding a square for the voter's cross in connection with the title of each list, thus:

☐ List 1.

☐ List 2.

☐ List 3.

This addition is permissible. If it is made, the "Directions to voters" should be changed to read thus:

Mark a cross (X) opposite the title of one of the lists of candidates. Mark also, if you have any preference among the candidates on the list you mark, the name of *one candidate only on that list*.

A ballot is spoiled on which two lists are marked, or on which a list and a candidate not on it are both marked. If you spoil, etc. If this addition is made to the list system provisions above, the wording of those provisions should, of course, be changed slightly to conform to the form of ballot used. A ballot marked for one individual candidate but not separately for any list's title should be regarded as valid and as exactly equivalent to a ballot on which the title of the candidate's list is also marked.

The second modification that should be mentioned is the substitution of party names for the titles, "List 1," "List 2," etc. Though I do not personally favor this modification, there is nothing in the system of election itself to prevent making it. If it is made, however, the simple provisions for nominating candidates covered by section 1 must be supplanted by far more elaborate provisions, such as legally regulated primaries, to guard against the giving of a party name to a list of candidates that has not a good right to it.

The third modification is changing section 6 to read thus: *After this first assignment of seats, the remaining seats, if any, shall be assigned to the lists showing the largest remainders of votes after the first assignment.* This provision is at least as fair as the other, and simpler. The provision in the text of the rules, which is essentially the same as that used in Belgium, favors the lists that receive most votes. There

¹ The reasons for these provisions are explained on p. 22 in connection with a concrete illustration. The provisions are essentially the same as those governing the assignment of seats to lists in the system of proportional representation used for parliamentary elections in Belgium. See the alternative form of this section explained below as the "third modification" to be considered.

is doubtless something to be said for favoring the largest parties or groups thus, but there is also much to be said—in my personal opinion more—for the simpler rule, which is as favorable to small parties as to large ones.

Consider how these rules would work out in a concrete case. Suppose the eastern district of Pennsylvania, which is to elect 9 of the 36 Members of the House of Representatives elected by the State, polls valid votes as follows:

<i>List 1.</i>	
Candidate A.....	40,000
Candidate B.....	60,000
Candidate O.....	4,000
Candidate P.....	52,000
Candidate S.....	1,200
Candidate T.....	40
Candidate V.....	30,000
Candidate Y.....	10,200
	<hr/>
	197,440
<i>List 2.</i>	
Candidate C.....	10,000
Candidate G.....	4,000
Candidate H.....	6,900
Candidate J.....	40,220
Candidate K.....	24,002
	<hr/>
	85,122
<i>List 3.</i>	
Candidate D.....	20,000
Candidate L.....	10,000
Candidate M.....	22,004
Candidate N.....	40,850
Candidate Q.....	60,408
Candidate U.....	2,208
	<hr/>
	155,470

The ballots being marked as shown by these figures, the total vote of the district would be 438,032. The quota would be that number divided by 9, which is 48,670 $\frac{2}{3}$.

As that last number is fully contained in the vote of the first list four times, that list is given four seats on the first assignment. The four candidates on the first list to receive these seats are (1) Candidate B, (2) Candidate P, (3) Candidate A, and (4) Candidate V.

As the quota is fully contained once in the vote of the second list, that list is given one seat on the first assignment, the candidate receiving it being Candidate J.

As the quota is fully contained three times in the vote of the third list, that list is given three seats on the first assignment, the candidates receiving them being Candidates Q, N, and M.

Applying now the rule of section 6 above, we find that dividing 197,440 by 5 gives us 39,488; dividing 85,122 by 2 gives us 42,561; and dividing 155,470 by 4 gives us 38,867 $\frac{1}{2}$. We therefore assign the ninth seat to the second list, the candidate receiving it being Candidate K. Applying the alternative form of section 6 suggested above, we assign the ninth seat to the second list because it shows the largest remainder after the subtraction of full quotas for the seats already assigned. In this case the two rules would give the same result, but in many cases they would not.

The second of these two rules for the filling of seats not filled by the first assignment explains itself. The first of them may seem merely

arbitrary. In fact, however, the first rule, though not, in my personal opinion, so fair as the second one, is based on a principle. The principle is that each seat remaining unassigned after the first assignment on full quotas shall be assigned to the list which, if it is assigned the additional seat in question, will have behind *each of its members* the largest part of a full quota.

Compare the errors of this election with those of an election of Representatives under our present single-member district system. Under the latter the error involved in the election of a Member often amounts, as we have seen, to from 40 to 60 per cent of all the voters of a constituency, and it would often amount to nearly 50 per cent of them even if a majority preferential system were substituted for our usual system of pluralities and primaries. In the election we have examined, on the other hand, the error, in the case of the election of each Member, is only the difference between the number of votes that elect him and a full quota. In the case of candidates B, P, A, and V, for example, the error is the difference between 49,360 (the number of times that 4 goes into 197,440) and 48,670 $\frac{2}{3}$, which is the full quota. In the case of candidates J and K the error is the difference between 42,561 (the number of times that 2 goes into 85,122) and 48,670 $\frac{2}{3}$, the full quota. In the case of candidates Q, N, and M the error is the difference between 51,823 $\frac{1}{3}$ (the number of times that 3 goes into 155,470) and 48,670 $\frac{2}{3}$, the full quota.

It should be noticed that every Member elected by this system is elected by a constituency that may fairly be called unanimous. Take the case of candidate V. It is true, of course, that many of the 42,561 votes by which candidate V is elected were cast by voters who preferred one of the other candidates, B, P, O, S, T, or Y. Yet every one of those voters indicated, by marking candidates in the first list after reading the "Directions to voters" at the top of the ballot, that he wanted to help elect some other candidate in that list if his vote could not be effective for the particular candidate he marked. It may be objected that the list itself did not *precisely* suit every one of the voters who decided to vote for some candidate on it. That is true, but it must at least have suited nearly every politically intelligent voter who supported it, for otherwise the unsatisfied would have taken advantage of the opportunity, easily afforded them by section 1 of the election provisions, to nominate one or more other lists. Within the limits of the flexibility of so simple a list system, therefore, the constituency electing candidate V—and the same may be said of any of the eight others elected—may be said to be unanimous.

The proportional system set forth above provides, therefore, a means by which at a single election the voters of a large district can form almost perfectly unanimous constituencies, each one of which contains approximately the same number of voters that there would be in an entire single-member district under our present system. Undersuch a system, therefore, the delegation of nine Members of Congress from the eastern district of Pennsylvania would represent the voters of that part of the State almost perfectly; and as the same would be true also of the three other large districts of the State and of all the enlarged districts of the other States, the House of Representatives as a whole would represent almost perfectly the voters of the Nation.

With various modifications, the list system of unanimous-constituency or proportional representation is in use for the election of the

Parliaments of Belgium, Sweden, and Finland, for that of the councils of about half the Cantons or States of Switzerland, and for that of town councils in Sweden, Switzerland, and elsewhere. Its adoption for parliamentary elections in France has already been voted by the Chamber of Deputies more than once, and it is expected to pass the Senate in the near future. President Poincaré and ex-Premier Briand are among the supporters of the reform.

Besides the list system, two other systems of unanimous-constituency or proportional representation deserve special attention in this country at the present time.

One of these, which is sometimes called the "single transferable vote" but is best called, from the name of its chief originator, the Hare system, is in use for the election of the Parliament of Tasmania, the municipal councils of Denmark, the Upper House of Denmark, and the Parliament of the Union of South Africa.¹ The same system has been incorporated in the "Home rule" bill for the election of all members of the Senate and 31 members of the House proposed for Ireland. I say the "same system" though the details of the provisions by which proportional representation is to be carried out in Ireland are to be prescribed, according to the bill, by the "King in Council." There is no doubt, since the Hare system is the only one strongly supported in the United Kingdom, that the "King in Council" will not think of prescribing any other. The clause of the bill prescribing proportional representation for the Senate passed the House of Commons on October 31, 1912, unanimously; that prescribing the system for the House of Ireland passed the same body on January 7, 1913, by a vote of 311 to 81. These votes were the natural result of the agitation that has been carried on in Great Britain for many years under the leadership of such men as John Stuart Mill, Lord Courtney of Penwith, Lord Avebury (better known to Americans as Sir John Lubbock), Earl Grey (recently Governor-General of Canada), and Mr. John H. Humphreys.

¹ The Hare system differs from the list system in that the names of candidates, instead of being nominated and arranged on the ballot in lists, are nominated singly and are arranged on the ballot in alphabetical order (with or without rotation of names) or in any other order considered fair.² It differs from the list system also in that the voter, instead of marking one candidate on one list with the understanding that if his vote cannot help elect the particular candidate marked it will help some other on the same list, indicates his own personal preferences—as many or as few as he pleases—by the figures 1, 2, 3, etc.³ Finally, of course, it differs from the list system in the rules of the count, which must be adapted to the form of ballot used. The dominating principle of the Hare rules is that each ballot is to be counted for the voter's highest preference (as indicated by the figures on the ballot) whom under the circumstances it can help.

¹ The advantage of the Hare system over the list is that it gives the individual voter the opportunity of having his vote count only in accordance with his own personal preferences, whereas the list system requires him to help a ready-made list when he helps one candidate on it. The disadvantages of the Hare system, as compared with the

¹ In the case of the Upper House of Denmark and the Senate of South Africa the system is applied not to the voting at the polls but to that of the electoral colleges by which the two bodies mentioned are elected. In Tasmania and in the municipal elections of Denmark the system is applied to popular elections.

list system or with the schedule system soon to be explained, are (1) that it practically requires the bringing together for the completion of the count of all the ballots cast for the election of the several representatives in question; (2) that the count is harder to explain and longer to carry out, and (3) that, unless the rules of the count are elaborated a good deal, small elements of chance remain involved in them which, though of trifling practical importance, are perceptible to critics and are sure to rouse opposition on the part both of those who seek some flaw to peck at and of those who, not understanding the system thoroughly, honestly think the elements of chance in its count seriously objectionable.

Hare ballot rules suitable for certain uses in this country, notably for the election of city councils under the admirable city manager plan of government, are printed below. It will be noticed that section 11 is given in alternative form. "Alternative Form A" means less work for the counters at the central bureau, but the retention in the count of an element of chance that can be eliminated. "Alternative Form B" eliminates this element of chance absolutely; it does it by the simple device adopted by the mother who, having three equally beloved children and three very unequal apples, cut the big apple, the middle-sized apple, and the mean little apple each into three pieces and gave to each of the children one piece of each apple. It may be asked why, since such a mathematically perfect device can be adopted to get rid of the chance in Form A, that alternative of the rule is offered at all. The reason is that Form A is enough simpler than the other to make a difference in respect to the adoption of the system in some cases, and the objections to it are not really serious. Ask yourself whether the voters whose ballots are left, under Form A, to elect their first choice are treated fairly. Then ask yourself whether those whose ballots are taken, under Form A, each to help elect the next preference marked on it who can be helped by it, are treated fairly. And no other voters are concerned. It is possible, of course, that distributing one group of a thousand ballots instead of another might make a difference between the election of one candidate and the election of another; but even if it did so, the group of members elected would in any case be truly representative of the voters who elected them, and there would be no more unfairness involved than there is in certain other features of an electoral system, for example the choice of Tuesday rather than Wednesday as election day.

HARE SYSTEM OF PROPORTIONAL REPRESENTATION.

Nomination and election provisions.

[Phrased suitably for a State law covering an optional charter plan for the municipalities of the State.]

Revised January, 1914.

Section 1. Nominations of candidates for the council shall be by petition, signed by electors (who have signed no other petition to nominate a candidate for the council at the same election) to the number, in municipalities of not more than ten thousand inhabitants, of three per cent of the number of electors who voted at the last preceding regular municipal election; to the number, in municipalities of more than ten thousand but not more than twenty-five thousand inhabitants, of two per cent of the number of electors who voted at the last preceding regular municipal election; and to the number, in municipalities of more than twenty-five thousand inhabitants, of one and a half per cent of the number of electors who voted at the last preceding regular municipal election: Provided, however, That in no case shall the number required be more than two hundred.

Each such petition shall be signed, filed, and verified in the manner prescribed by law, shall contain the signed consent of the candidate, and shall be filed with the election authorities at least thirty days prior to the election.¹

Sec. 2. The ballots used in all elections provided for in this act shall be without party marks or designations. The names of candidates on such ballots shall be printed in rotation,² as follows:

The ballots shall be printed in as many series as there are candidates for the council. The whole number of ballots to be printed shall be divided by the number of series, and the quotient so obtained shall be the number of ballots in each series.

In printing the first series of ballots the names of candidates for the council shall be arranged in alphabetical order. After printing the first series, the first name in the list of candidates shall be placed last in such list and the next series printed, and the process shall be so repeated until each name in the list of candidates shall have been printed first an equal number of times. The ballots so printed shall then be combined in tablets, so as to have the fewest possible ballots having the same order of names printed thereon together in the same tablet. The ballots shall in all other respects conform as nearly as may be to the ballots prescribed by the general election laws of the State.

The form of the ballot shall be as follows:

[Form of ballot.]³

FOR REPRESENTATIVES IN THE COUNCIL.	
DIRECTIONS TO VOTERS: Put the figure 1 opposite the name of your first choice for the council. If you want to express also second, third, and other preferences, do so by putting the figure 2 opposite the name of your second choice, the figure 3 opposite the name of your third choice, and so on. You may express thus as many preferences as you please. This ballot will not be counted for your second choice unless it is found that it cannot help your first; it will not be counted for your third choice unless it is found that it cannot help either your first or your second; etc. The more choices you express, the more likely you are to make your ballot count for one of the candidates you favor.	
A ballot is spoiled if the figure 1 is put opposite more than one name.	
If you spoil this ballot, tear it across once, return it to the election officer in charge of the ballots, and get another from him.	
CANDIDATES FOR THE COUNCIL.	
	[Name.] [Domicile address.]
	A
	B
	C
	D
	E
	F
	G
	H
	I
	J
	K
	L

¹ These conditions for nominating candidates may be modified, if it is thought best, by reducing somewhat the number of signatures required and requiring the deposit in connection with each nomination of a small amount of money, to be returned to the depositor if the nominee in question receives in the election a reasonable number, say about a quarter of a quota, of first-choice votes and votes transferred from surpluses put together.

² Of course these provisions for rotation of the names on the ballots are not an essential part of the plan. If rotation is not desired, put the words "alphabetical order" instead of the word "rotation" here and omit the passage that follows as far as the words "The ballots shall in all other respects."

³ Of course the squares for the voter's marks should be at the right of the names instead of at the left in States where custom would require such a change.

Sec. 3. The numerals thus marked on the ballot shall be understood to mean that the voter wishes his vote to be effective in the election of his highest preference possible under the rules, a candidate whose name is marked with a smaller number being always preferred to one whose name is marked with a larger number and the latter to one whose name is not marked at all, and that he desires his ballot, in case it appears on any count that it is not needed by, or cannot under the rules be effective in the election of, that candidate for whom it has been or would be counted, to be transferred to another candidate in accordance with his preferences marked thereon.

Sec. 4. The ballots shall first be sorted and counted at the several voting precincts according to the first choices of the voters. The valid ballots so cast for each candidate shall be sorted into two groups, that of valid ballots on which the voter's second choice is clearly indicated and that of valid ballots on which his second choice is not clearly indicated. Each such group shall be tied up by itself and properly marked on the outside, and the two for each candidate shall then be tied up in one bundle which shall also be properly marked on the outside. All the bundles thus made up at a precinct, together with the invalid ballots and a record of all the ballots cast at the precinct, showing the number of invalid ballots, the number of valid ballots, the total number of first-choice ballots for each candidate, and the number of ballots in each of the two groups of first-choice ballots received by each candidate, shall be forwarded to the board of deputy State supervisors of elections or the board of deputy State supervisors and inspectors of elections,¹ as directed by that board, and the counting of the ballots shall proceed under its direction.

Sec. 5. First-choice votes for each candidate shall be added and tabulated as the first count.

Sec. 6. The whole number of valid ballots shall then be divided by a number greater by one than the number of seats to be filled. The next whole number larger than the quotient thus obtained shall be the quota or constituency.²

Sec. 7. All candidates the number of whose votes on the first count is equal to or greater than the quota shall then be declared elected.

Sec. 8. All votes obtained by any candidate in excess of the quota shall be termed the surplus of that candidate.

Sec. 9. The surpluses shall be transferred, successively in order of size from the largest to the smallest, each ballot of the surplus being transferred to and added to the votes of that continuing candidate for whom a preference is indicated on it. [If section 11 is adopted in Form B, change the last clause of section 9 to read thus: the votes of the surplus being transferred to and added to the votes of continuing candidates, according to the highest available preferences indicated on the ballots capable of transfer, as prescribed in section 11.]

Sec. 10. "Ballots capable of transfer" means ballots from which the preference of the voter for some continuing candidate can be clearly ascertained. "Continuing candidates" means candidates who have not been declared elected or defeated.

Sec. 11. Alternative Form A. The particular ballots to be taken for transfer as the surplus of any candidate shall be those that come to hand indiscriminately, without selection, from such of his ballots as are capable of transfer, and the order in which those ballots shall severally be transferred shall be that in which they happen to come, without selection. All the ballots not so transferred as surplus shall be set aside as effective in the election of such candidate.

Alternative Form B. In transferring the surplus of any candidate, all the ballots capable of transfer that were cast for him as first choice shall be transferred, each ballot being reckoned for this purpose, however, only as such fractional part of a vote as is required to make the total number of whole votes transferred that number—except as reduced by the disregard of fractions prescribed in this section below—which was available for transfer. In crediting votes thus transferred from the surplus of any candidate to any other candidate who may receive them, fractional parts of a vote shall not be counted.³

¹ In some States the proper officials would have some other title. The alternative title given would be suitable for Ohio.

² To see that section 6 accords with common sense one has only to consider that in any whole number of votes there cannot be more than one group larger than half of the whole number, or more than two groups each larger than a third of the whole number, or more than nine groups each larger than a tenth of the whole number, etc.

³ Example: Suppose the quota is 10,001 votes, and Candidate A gets 20,027 first-choice votes, of which 19,980 are capable of transfer. Then, since Candidate A needs 10,001 votes to make up his own quota, he needs, in addition to the 47 ballots cast for him that were not capable of transfer, 9,984 of the 19,980 votes represented by the 19,980 ballots capable of transfer. Therefore only 10,026 votes are available for transfer to other candidates, and in the transferring of the 19,980 ballots each of those ballots must be reckoned as only $\frac{10,026}{19,980}$ of a whole vote. So when it is found that Candidate M, for example, receives 500 of the 19,980 transferred ballots, he ought to be credited with only $250 \frac{10,026}{19,980}$ votes, for that is $\frac{10,026}{19,980}$ of 500. And as the rule provides for the neglect of fractions in crediting votes, Candidate M is credited with 250 votes simply.

The use of such fractions has to be resorted to, of course, only for a single multiplication in connection with each of the candidates who receives a batch of ballots on the transfer of a surplus. As this part of the counting is all carried out at the central bureau, and the arithmetical calculations involved are few and simple, the apparent complexity of the transfer of surplus votes according to Form B of Section 11 should not be considered a serious objection to the adoption of the rule in that form. The transferring of votes thus offers no difficulties in practice, according to the highest official evidence from Tasmania. (See testimony of John McCall, Agent-General of Tasmania, before the British Royal Commission in 1909—British Blue Book "Cd. 5352," 1910, especially ¶3029.)

Sec. 12. After the transfer of all surpluses, the votes standing to the credit of each candidate shall be counted and tabulated as the second count.

Sec. 13. After the tabulation of the second count (or after that of the first count if no candidate received a surplus on the first) the candidate lowest on the poll as it then stands shall be declared defeated and all his ballots capable of transfer shall be transferred to the continuing candidates, each ballot being transferred to the credit of that continuing candidate preferred by the voter. After the transfer of these ballots a fresh count and tabulation shall be made. In this manner candidates shall be successively declared defeated, and their ballots capable of transfer transferred to continuing candidates, and a fresh count and tabulation made. After any tabulation the candidate to be declared defeated shall be the one then lowest on the poll.

Sec. 14. Whenever in the transfer of a surplus or of the ballots of a defeated candidate the votes of any candidate shall equal the quota, he shall immediately be declared elected and no further transfer to him shall be made.

Sec. 15. When candidates to the number of the seats to be filled have been declared elected, all other candidates shall be declared defeated and the count shall be at an end; and when the number of continuing candidates shall be reduced to the number of seats to be filled, those candidates shall be declared elected and the count shall be at an end; and in this case the ballots of the last candidate defeated need not be transferred.

Sec. 16. If at any count two or more candidates at the bottom of the poll have the same number of votes, that candidate shall first be declared defeated who was lowest at the next preceding count at which their votes were different. Should it happen that the votes of these candidates are equal to each other on all counts, they shall be declared defeated successively from the younger to the older.¹

Sec. 17. No ballot shall be counted in such a way as to make it effective in the election of more than one candidate.

Sec. 18. On each tabulation a count shall be kept of those ballots which have not been used in the election of some candidate and which are not capable of transfer, under the designation "Nontransferable ballots."

Sec. 19. On each tabulation a count shall be kept of the invalid ballots; but no ballot shall be declared invalid except one on which the first choice of the voter cannot be clearly ascertained. A ballot marked with a cross opposite one name but with no other mark shall be treated exactly as if it had been marked with the figure 1 opposite the same name but with no other mark.

Sec. 20. Every ballot that is transferred from one candidate to another shall be stamped or marked so that its entire course from candidate to candidate throughout the count can be conveniently traced. In case a recount of the ballots is made, every ballot shall be made to take in the recount the same course that it took in the first count unless there is discovered a mistake that requires its taking a different course, in which case such mistake shall be corrected and any changes made in the course taken by ballots that may be required as a result of such correction. The particular ballots the course of which is to be changed in the recount as a result of such corrections shall be taken as they happen to come, without selection.

Sec. 21. So far as may be consistent with good order and with convenience in the counting and transferring of the ballots, the public, representatives of the press, and especially the candidates themselves shall be afforded every facility for being present and witnessing these operations.

The third of the three systems of unanimous-constituency voting for the make-up of representative bodies that seems to me to deserve special attention in this country at the present time is the Gove or schedule system, which was devised independently by William H. Gove, Esq., of Salem, Mass., and Archibald E. Dobbs, Esq., of Ireland.

Under this plan the candidates' names are printed on the ballot in a single column, as under the Hare. But under this plan each candidate really stands for a whole list, the distinguishing feature of the plan being that every ballot that cannot help elect the candidate for whom it was cast—either because he has enough without it or because he is hopelessly out of the running even with it—is to be counted to help one of the other candidates in accordance with a list or schedule of preferences handed in to the electoral officials by the candidate himself and duly published several days before the election.

¹ For the last 12 words of section 16 may be substituted the following, if they are preferred: "lotshall be drawn to decide which candidate shall next be declared defeated." The words in the text of the rules in accordance with a reasonable practice embodied in the legislation of some countries.

Among the differences between the schedule plan and the list plan are these:

(1) The former lends itself to the Australian form of ballot, whereas the latter lends itself to the party-list form of ballot.

(2) The former offers the voter many lists, a different one for each candidate, without making the ballot physically cumbersome, whereas the latter either restricts the voter to his choice among a few lists or makes the ballot cumbersome. Neither plan, of course, makes the ballot "long" in the political sense of that word; for, politically, a ballot is "long" that is hard to vote so as to make the voter's will effective, and a ballot is "short" that is easy to vote so as to produce that result; and it is very easy for the voter to vote so as to make his will—or what, at least, closely approximates to his precise will (see remarks on the Hare plan just below)—effective with either a schedule-plan or a list-plan ballot.

(3) The schedule plan allows a candidate's name to be on more than one list, whereas the list plan does not.

The significant differences between the schedule plan and the Hare can be stated briefly. The schedule plan, like the list, does not offer the voter the same opportunity that the Hare does to make his vote count only in accordance with his own personal list of preferences. Since any limitation whatever of the voter's power to make his ballot count exactly in accordance with his own will is at least a slight vitiation of democracy at the fountain head, this is a matter of some importance. The schedule plan, however, like the list again, is far simpler to explain than the Hare, does not require the bringing together of the ballots from the precincts for the completion of the count, and adapts itself to our custom of voting simply by making a cross against one name. For many uses, notably where the territorial area of the election is very wide, as in the case of the election of State legislators, Congressmen, or presidential electors, these practical advantages of the schedule and the list plan are important.

The principal provisions that should be included in a bill providing the schedule plan for the election of a representative body are:

1. Nomination by petition (if not provided for by existing laws); with domicile address of each nominee and with or without provisions for a deposit as explained in a footnote above in connection with section 1 of the Hare rules.

2. Permission—it should not be a requirement—for each nominee to file within a specified time the names, arranged in an order of preference, of one or more of the other nominees to whom votes cast as first-choice votes for himself are to be transferred in case they can not help him because, according to the rules of the count, he has enough to be elected without them or so few as to be out of the running with them.

Requirement that no such list is valid unless accompanied by the signed assent, on the part of each nominee whose name appears in it, to the presence of his name on the list in the position in which it stands.

3. Specifications in regard to the publication of the lists before the election.

4. Specifications in regard to the quota or constituency that entitles a candidate to election, like those of section 6 of the Hare provisions in this paper.

5. Rules in regard to the distribution of the surpluses (of votes received directly by any candidates), one after another in order of size, to the other nominees, according to the preferential list, if any, handed in by the nominee furnishing the surplus.

6. Provisions similar to those of sections 12, 13, 14, 15, 16, 17, 18, 19, and 21 of the Hare rules.

One modification of this system, affecting sections 2 and 5, deserves mention. If it is thought best, the requirement that the names on a list shall be in a definite order of preference (see section 2) may be omitted, in which case the order in which the candidates on a list shall be preferred in the transfer of votes (see section 5), shall be that of their strength as indicated by the number of votes received by them directly. This modification is thought by some proportionalists to be an improvement. Though it gives the voter less definite knowledge than the other provision does in regard to how his vote will be transferred in case it cannot be used to help the candidate of his first choice, it has some advantages that will suggest themselves readily to every reader.

TO WHAT ELECTIONS SHOULD PROPORTIONAL SYSTEMS BE APPLIED?

Some proportional or unanimous-constituency system should be applied to the election of every body whose chief function is to deliberate and to make important decisions or appointments on behalf of those who elect it. This includes city councils under the Federal plan and the city manager—sometimes called the commission-manager—plan of government. It does not include the commission under the Des Moines plan, because under that plan the administrative functions of the commissioners are more important than their representative functions. It includes both chambers of our State legislatures so long as two chambers are elected at all. As soon, however, as one chamber is made truly representative of the entire body of voters of the State, the second chamber will doubtless be done away with. It includes the House of Representatives of the United States. It includes the National Electoral College. It includes the standing committees of our representative bodies. It includes boards of education and other such public boards until the powers of such boards are given over to the truly representative legislatures and city councils and their purely administrative duties are given over to professional administrators. It includes representative committees of clubs, college and school classes, and private organizations generally.

Where in these cases the difficulties of explaining the system and counting the ballots are not insurmountable obstacles, the Hare system is to be preferred to the list or the schedule. There is no reason why the Hare should not be used for many purposes, including the election of some of our city councils. Wherever, however, it seems necessary to have recourse to a system easier to explain and providing an easier count, the list or the schedule is to be recommended with confidence that either of them will work admirably and give us a representative body that really represents. For the election of Members of Congress and members of the Electoral College the list system, the simplest of all to explain and to introduce, seems especially suitable. In connection with the Electoral College it may be added that if the list system explained in this paper, *without party names or emblems on the*

ballot, were adopted for the election of the group of presidential electors assigned to each of the States, not only would the division of the college between the several parties be much fairer than it has been hitherto, but the need of a vast primary system to decide what candidate has the right to be called the candidate of any party would be wholly obviated. It is to be hoped, therefore, that it may be possible to get such a system for the election of presidential electors adopted in the States generally before we undertake the big task of putting in operation a direct primary system—which the greater and more easily introduced reform proposed would make superfluous—for the nomination of party candidates for the Presidency.

TRUE REPRESENTATION AND EFFICIENCY.

A point of the greatest importance in connection with the introduction of a unanimous-constituency system of representation, which will simply condense the voters into a body made up of the true leaders of all shades of opinion and interest, is that it opens the way for taking all the chief administrative offices off the ballot altogether, and for filling them by majority preferential vote¹ of the representative body itself. Provide that such administrative officials shall hold office indefinitely during the pleasure of the representative body, that each representative shall affirm, as a condition of taking his seat, that in voting for the selection or the retention of such an official he will be guided only by considerations of fitness for the work after thorough investigation, and you have the most democratic method yet discovered for having the purely administrative work of government done efficiently.

Though the brilliant work of the National Short Ballot Organization has brought this principle to our attention recently under a new name, there is really nothing new in the principle itself. The efficient chief administrator of an English city, the city clerk, is selected by the council to serve indefinitely during its pleasure. The efficient chief administrators of Prussian cities, the *bürgermeisters*, are selected and retained in office in the same way. And there is nothing undemocratic about it; that is democratic which gives actual effect to the people's will—not that which pretends to, but doesn't. The people's real will is to have their business done economically and well; and as they know that they are not in a position to select administrators at the polls so well as their representatives can select them by giving the matter thorough-going attention, they greatly prefer, as soon as their eyes are opened to perceive the mockery of democracy now known as the "long ballot," to let their representatives select these officials, and then to hold the representatives strictly accountable for the trust. Now the unanimous-constituency system of representation, by insuring the election of a representative body fit to make selections, between men as well as between measures, on behalf of all—subject, I should personally hope, to the operation of the initiative, referendum, and recall (the last named as explained below)—opens the way for the attainment of efficiency without the sacrifice of a jot or a tittle of democracy.

¹ For majority preferential voting in a representative body no other system than the Nanson need be considered.

PROPORTIONAL REPRESENTATION AND THE RECALL.

Hitherto the recall has been applied only to officials elected by a plurality or majority system. For officials elected thus the method of applying the recall hitherto in use is perfectly reasonable. For a representative elected under a proportional or unanimous-constituency system, however, the method of applying the recall should be quite different. A representative elected under such a system holds his seat by virtue of the unanimous support of a body of voters numerous enough to have a right to fill one of the seats regardless of the possible opposition of every other voter in the district. To provide, therefore, that a representative holding his seat on such a basis could be ousted from it at any time by a mere majority of the voters of the district would be absurd. But the way out of the difficulty is simple—provide that when a sufficient number of voters of the district demand it—a multi-membered district, of course, as that is the *sine qua non* of proportional representation—a recall election shall be held, under the proportional rules governing regular elections, for *all* the representatives of the district. The result of such an election will be that every member for the district who still has a “quota” or constituency behind him will get his seat again, and any member who does not will lose his seat.

One other point in this connection should be covered. There is no need of providing that officials holding office at the pleasure of the representative body shall be subject to the recall at all. Why? Because if it is time to recall such an official it is time to hold recall elections covering the entire membership of the representative body itself, for that body should be held absolutely responsible for an official whom it has the power to replace at pleasure.

These are the principles that should govern the relations between proportional representation and the recall. In actual practice, however, it will be found that the use of the recall in connection with representative bodies elected by good systems of proportional representation will scarcely ever be resorted to.

CONCLUSION.

To sum up a few of the points covered by this article, there is no place at all, in a plan of government suited to modern conditions, for either primary elections or plurality voting. When the object of the voting is to make a selection among more than two candidates for one non-representative office or to make a decision among more than two measures or policies, the voting should be done by one of the majority preferential systems explained in the first part of this article, preferably by the Nanson system where the counting of the ballots by that system would not be seriously inconvenient. When the object of the voting is to make up a selection-making or decision-making body—that is, a deliberative, representative, legislative, policy-determining body—the voting should be done by a unanimous-constituency or proportional system, such as the Hare, the list, or the schedule. In majority preferential voting the voter should be allowed to express his will on the ballot *as fully as he pleases*; and the will of the majority should be interpreted, as soon as it is feasible to supplant the systems already in use, by the infallible system of Nanson.

In unanimous-constituency voting the voter should be allowed to express his full will not only as fully as he pleases but *as exactly as is feasible*; in other words the Hare system should be preferred to the list or the schedule except where simplicity of counting is required. The marking of majority ballots should in all cases be by the figures 1, 2, 3, etc.; that of unanimous-constituency ballots by the same method under the Hare system, by a simple cross under the list or the schedule system. A representative body elected by a system insuring true representation should be given the power to select and to retain in office indefinitely during its pleasure chief administrative officials of professional experience and attainments.

Finally, to add one point, as bodies supposed to be representative are made truly representative and the selection and retention of the chief administrators is given into their hands, so that the majority voting called for in the selection or retention of such officials is transferred from the polls to the representative chamber, majority voting will gradually disappear from elections at the polls and the majority voting done in the representative chamber will be by the Nanson system.

Effective voting, the leading principles of which as applied to American conditions have been explained in this paper, is the indispensable basis of the mechanism of democracy demanded by the needs of the present and the coming age.

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